

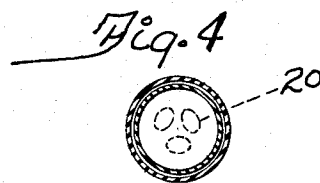
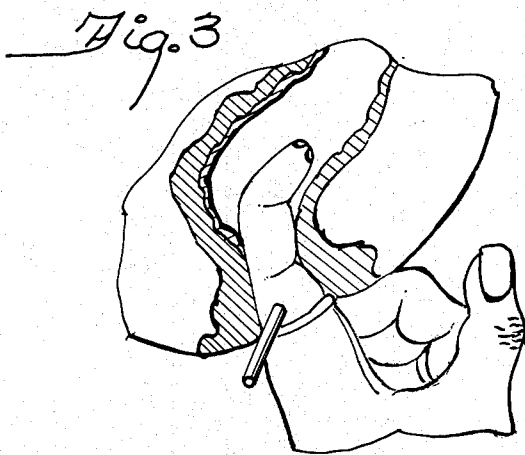
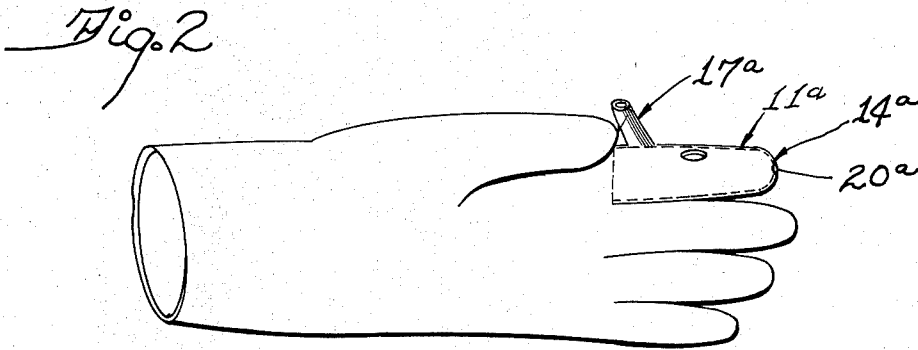
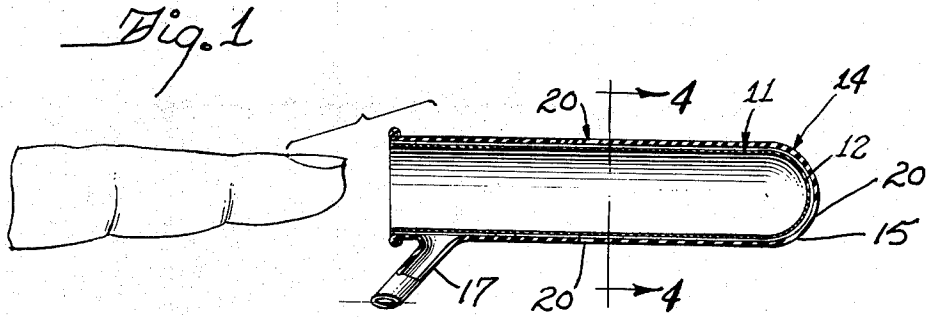
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FINGER-TIP APPLICATOR

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FINGER-TIP APPLICATOR

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5 Claims. (Cl. 128—260)

The present invention relates to a finger-tip applicator and has special reference to a finger-tip enema or douche applicator for supplying medicines or other materials to interior cavities of the body such as the rectum or vagina.

Heretofore inert tubes and instruments have been used for such purposes. They are not particularly effective and may even result in injury to patients and others using them. The present applicator permits an enema, douche or other irrigation to be self-given, or given by another, painlessly, hygienically, without trauma and without any soiling. Due to the sensitivity, dexterity and flexibility of the human finger as well as intelligent coordination to guide it, the applicator may be inserted as easily and accurately as the conventional cot commonly used by doctors.

The applicator may be in the general form of the usual cot, or may be made as a finger of a disposable plastic glove or other protective device.

A short connecting tube preferably extends through the outer member of the applicator adjacent its open end, permitting the applicator to be readily and detachably connected to a source of material to be supplied to the body cavity.

An object of the present invention is to provide a finger-tip applicator which may be readily positioned on a finger for accurate, easy insertion into a body cavity.

Another object is to provide such an applicator made of flexible, preferably elastic, material.

A further object is to provide such an applicator which does not substantially interfere with the dexterity and sensitivity of the finger to which applied.

Still another object is to provide an applicator of the above type which is inexpensive and may be disposed of after use.

A still further object is to provide such an applicator which is sterile and hygienic.

An additional object is to provide an applicator which may be readily inserted into a body cavity without any injury to the person being treated.

Further objects and advantages will be apparent when considered in connection with the following specification and drawings, in which latter:

FIGURE 1 is a central, vertical cross-sectional view of an applicator embodying the present invention;

FIG. 2 is a plan view of a protective glove, with the present applicator forming one of the fingers thereof;

FIG. 3 is a view of the applicator shown in FIG. 1 inserted in the rectum of a person being treated; and

FIG. 4 is a cross-sectional view taken on the line 4—4 of FIG. 1.

Referring more particularly to the drawings, there is shown a finger-tip, double-tube applicator embodying the present invention. The applicator may comprise an inner tubular member 11 closed at its outer end 12 and open at the opposite end 13 to permit it to be applied over a finger of the operator. The tubular member 11 is preferably made of latex rubber. However, other thin, flexible materials may be employed, preferably those which are also elastic, such, for example, as artificial rubber and plastic materials such as vinyl, polyethylene, etc. This member may suitably be similar to a latex rubber cot of the type widely employed by doctors and surgeons. This fits over the finger of the operator.

There is positioned about the inner tubular member 11 an outer tubular member 14 which preferably, but not

necessarily, has a slightly larger cross-sectional area and a slightly greater length than the inner tubular member 11. However, like the inner tubular member 11, it is closed at one end 15 and is open at the other end 16. The closed end, and if desired the sides of this member may be provided with one or more perforations 20. The outer tubular member is preferably formed of the same material as the inner member, although this is not absolutely necessary.

The inner and outer members are sealed together at their open ends, thus forming a generally tubular passageway or prospective passageway therebetween through which liquids or other materials may be forced and then discharged through the perforations 20.

A tubular stub connector 17 is sealed to the outer tubular member 14 adjacent its open end 16 to permit a tube from an enema bag or other source of material to be connected to the applicator.

After being formed as shown in FIG. 1, the applicator may be rolled up in the same manner as the usual latex rubber finger cot. It may, therefore, be readily applied to the index finger of the user.

The applicator is placed over the index, or one of the other, fingers of the hand, whether or not a glove is on the hand. It is lubricated, and the finger with the applicator thereon is inserted into the body cavity. When the applicator is properly positioned, a tube connecting the source of the material to be inserted is attached to the connector stub 17 and the liquid or other material is discharged into the body cavity.

The perforations 20 in the outer tubular member are of sufficient size to permit discharge therethrough of the material to be inserted into the body cavity at a desired rate. Due to the larger cross section and length of the outer tubular member 14 and/or the elasticity thereof, the material from the source of supply will flow through the chamber between the two tubular members and out through the perforations in the end of the outer member into the body cavity.

The pressure of the fluid supplied to the applicator is sufficient to overcome any sphincter spasm or pressure and insure the flow of material through the applicator. Moreover, because of the distending effect of the material flowing through the applicator, there is little danger of any fluid escaping from the cavity opening about the applicator with consequent soiling of the operator or the patient.

As illustrated in FIG. 2, the applicator can be made as part of a rubber or surgical glove. In this instance, the left index glove finger is formed with inner and outer tubular members 11a and 14a, respectively, both of which are closed at their outer ends and open at their opposite ends to permit the entry of the finger therein. The outer tubular member 14a is provided with perforations 20a in its closed end, and a tubular stub connector 17a is provided.

As shown in FIG. 3, the present applicator applied to the finger can be positioned as desired within a body cavity, thus resulting in the most efficient use thereof and the avoidance of any injury to the person being treated. Following use of the applicator, it may be thrown away or discarded for hygienic purposes.

While particular embodiments of this invention have been illustrated and described, it will be understood, of course, that the invention is not to be limited thereto since many modifications may be made, and it is contemplated, therefore, by the appended claims, to cover any modifications that come within the true scope of this invention.

I claim:

1. A reusable finger-tip applicator comprising an inner flexible finger-fitting tubular member closed at one end and open at the other to permit placement over a finger,

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an outer flexible tubular member of liquid-impervious material closed at one end and open at the other fitting over and substantially completely enclosing said inner tubular member except at said open end, said outer tubular member having at least one perforation therein spaced from said open end, and said tubular members having their open ends sealed together and being otherwise sufficiently disconnected to permit liquid supplied between said inner and outer members adjacent their sealed ends to flow outwardly between said members on substantially all sides of said applicator and be discharged through each perforation in the outer member, there being a perforation at each location about said applicator from which it is desired to discharge liquid flowing outwardly between said inner and outer members, said applicator being devoid of any material between said members which would interfere with said flow of liquid, and means adjacent said sealed ends for being connected to a source of liquid to supply liquid between said inner and outer members.

2. An applicator as defined in claim 1 in which said in-

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ner and outer tubular members are formed of flexible elastic material.

3. An applicator as defined in claim 1 in which said inner and outer tubular members are formed of latex rubber.

4. An applicator as defined in claim 1 in which said outer tubular member is of greater cross-sectional area and length than said inner tubular member.

5. An applicator as defined in claim 1 in which said means for supplying liquid between said members comprises a tubular connector extending through said outer member.

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